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### **Avo Photonics Develops SLED-Based Broadband Near-Infrared Source for Luxmux**

Horsham, PA, June 6, 2014- Avo Photonics, a leader in optoelectronic product design, development, and manufacturing, was commissioned by Luxmux Technology Corporation, to develop and manufacture a solid-state, broadband, continuous emitter for use with their line of miniature integrated spectrometers.

The emitter combines the outputs of multiple super-luminescent LEDs (SLEDs) into a polarization-maintaining single-mode fiber. Such an accomplishment required collimating multiple beams and achieving collinearity to an overlap of 700 um and pointing to within 250 urad. The result is a >100 mw, fiber-coupled source with continuous emission over the 1250 – 1750 nm band. Avo's extensive know-how and experience in rugged design, robust packaging, and precision optical alignment was leveraged to develop an industrial product capable of withstanding the harsh operating environments of Luxmux's licensing partners in the oil and gas market and other commercial/industrial markets including environmental and air quality monitoring.

The integration of this light source and high-resolution spectrometer into one compact robust package with no moving parts sets an industry precedent. It enables Luxmux's BeST-SLED<sup>®</sup> line of products to stand out amongst other analytical spectral devices. The initial application for Luxmux's breakthrough technology will be for real-time, in-situ measurement of industrial boiler steam output to optimize the process of liquefying Bitumen for extraction at oil sands production sites (i.e., SAGD applications).

Luxmux's technology delivers significant operational and environmental benefits by reducing operating costs, greenhouse gas emissions, and water consumption.

"What Luxmux conceptualized impressed our team and we are excited to be a part of this innovative spectroscopy," states Dr. Apurva Jain, Optical Program Manager at Avo Photonics. "Their challenging set of requirements were realized utilizing Avo's unique talent and experience".

"Avo's history in developing miniature optoelectronic packaging solutions gave us confidence they would accommodate the needs for the design and development of our product. Not only did they meet our performance targets, but they did it on time while demonstrating scalability for volume manufacturing," states Yonathan Dattner, President of Luxmux. "We are very excited to move forward with Avo for volume manufacturing".

#### **About Luxmux**

Luxmux Technology Corporation is a photonic technology company and an OEM who develops innovative and enabling products for photonic applications. Luxmux is a supplier to integrators who incorporate the technology over a broad range of spectroscopy applications. Luxmux was named as the 2015 ASTech Outstanding Technology and Science Start-Up winner for the development of their Silicon Nanophotonic FTNIR-based spectrometer on a chip as used in the BeST-SLED<sup>®</sup> design. To learn more about Luxmux, visit: <http://www.luxmux.com/>

#### **About Avo Photonics**

Avo Photonics provides exclusive, custom optoelectronic design, prototyping and production services for military, aerospace, medical, industrial, and communications applications. Through its pure-service business model, Avo produces confidential, client-owned products and systems that launch its customers to the forefront of their markets. To find out more about Avo Photonics and its unique service process that enables it to work with companies at any stage of their idea lifecycle, visit <http://www.avophotonics.com>.

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